

CUYAHOGA VALLEY NATIONAL PARK
Programmatic Environmental Assessment for Riverbank Management
of the Cuyahoga River

Appendix H

**Evaluation of Potential Impacts to the Segment of the Cuyahoga River on the
Nationwide Rivers Inventory**

1.0 Introduction

Section 5(d) of the National Wild and Scenic Rivers Act (16 U.S.C. 1271-1287) requires that "In all planning for the use and development of water and related land resources, consideration shall be given by all federal agencies involved to potential national wild, scenic and recreational river areas." It further requires that "the Secretary of the Interior shall make specific studies and investigations to determine which additional wild, scenic and recreational river areas ... shall be evaluated in planning reports by all Federal agencies as potential alternative uses of water and related land resources involved."

In partial fulfillment of the Section 5(d) requirements, the NPS has compiled and maintains a Nationwide Rivers Inventory (NRI), a register of river segments that potentially qualify as national wild, scenic or recreational river areas. The NRI qualifies as a comprehensive plan under Section 10(a)(2)(A) of the Federal Power Act.

Under a 1979 Presidential Directive and related CEQ procedures (Council on Environmental Quality, 1980), all federal agencies must seek to avoid or mitigate actions that would adversely affect one or more NRI segments. Further, all agencies are required to consult with the National Park Service prior to taking actions which could effectively foreclose wild, scenic or recreational status for rivers on the inventory.

NPS Management Policies (NPS, 2001a, Section 4.3.4) direct parks containing one or more segments listed in the NRI to comply with Section 5(d)(1) of the Wild and Scenic Rivers Act which instructs each federal agency to assess whether those rivers are suitable for inclusion in the system. This section goes on to state, "Such assessments, and any resulting management requirements, may be incorporated into a park's general management plan or other management plan." Such an assessment has not yet been accomplished at CVNP, so it is necessary for the park to follow the CEQ procedure.

Public Law 88-29, Outdoor Recreation Act of 1963 authorizes the Secretary of the Interior to: prepare and maintain a continuing inventory and evaluation of outdoor recreation needs and resources including rivers; provide technical assistance; encourage interstate and regional cooperation in the planning, acquisition and development of outdoor recreation resources; sponsor and engage in research and education; cooperate with and provide technical assistance to federal departments and agencies; and promote coordination of Federal plans and activities

generally relating to outdoor recreation resources including rivers and associated trail corridors. These responsibilities are also assigned to the National Center for Recreation and Conservation of the NPS.

2.0 Nationwide Rivers Inventory Segment

The NRI is a listing of free-flowing river segments in the United States that are believed to possess one or more “Outstandingly Remarkable Values (ORV’s)” judged to be more than local or regional significance. A reach of the Cuyahoga River from the vicinity of Chippewa Creek upstream to Peninsula is listed in the NRI with ORV’s for Scenery, Recreation and Fish. An impact to the free-flowing nature of this segment or to one or more of the ORV’s in this segment could affect the ability for the segment to be designated as a Wild or Scenic River in the future. “Rip-rap, bank stabilization or erosion control structure” is listed in the CEQ procedures as an example of types of developments which would generally require consultation with NPS because of the potential for adverse effects on the values of a potential wild, scenic, or recreational river. Therefore, aspects of any Riverbank Management action in this reach area examined for its potential to adversely affect the ORV’s.

A portion of the Nationwide Rivers Inventory listing for the Cuyahoga River is shown on Table H-1. The “year listed/updated” in the listing is 1982. The reach of the Cuyahoga River from the end of the restored portion of the canal (the vicinity of Chippewa Creek) upstream to the dam at Peninsula corresponds to Study Reaches 3, 4 and 5 of this Programmatic Environmental Assessment (EA). Of the 36 monitoring sites examined in this Programmatic EA, 16 are included in this segment.

Table H-1. Nationwide Rivers Inventory for the Cuyahoga River.¹

County	Reach	Length (Miles)	ORVs	Description
Cuyahoga, Summit, Portage	From end of canal to dam at Peninsula (8 river miles); Lake Rockwell to Montea. Poiner trail crossing to channelization (11 rm); E. Br. Reservoir to source of E. Br. (7 rm)	26	Scenery, Recreation, Fish	Designated segment of State Scenic Rivers System. Swamp forest vegetation. Two Ohio endangered species present, Iowa darter and lake chubsucker. Excellent canoeing stream. Small and large mouth bass and northern pike fishing. A scenic stream flowing through woods and farmland with some marsh and wetland. Near cities of Cleveland and Akron.

The methodology for assessing the potential for impact on the NRI status is to assess the potential for impact to the free-flowing nature of the segment and on each of the ORVs. This appendix discusses how the free-flowing nature and the ORVs relate to impact topics covered in this Programmatic EA. This appendix then takes the analysis in of the impact topics in this Programmatic EA and applies them to the NRI segment of the Cuyahoga River, and includes any special considerations that should be made for riverbank management in the NRI segment.

¹ (See <http://www.nps.gov/ncrc/programs/rtca/nri/states/oh.html>)

Among other things, the CEQ procedures (Council on Environmental Quality, 1980) state that adverse effects on inventoried rivers may occur under conditions which include, "Introduction of visual, audible, or other sensory intrusions which are out of character with the river or alter its setting." Appended to the procedures is a "Guide for Identifying Potential Adverse Effects," that specifies that "free-flowing" refers to "existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway."² The Programmatic EA alternatives are therefore examined for the riverbank stabilization techniques used in the NRI segment and the potential for these techniques to be intrusions which are out of character with that segment of the river, and that would modify the NRI segment.

The NRI website³ provides the following descriptions for the ORVs involved in the Cuyahoga River segment:

Scenery (S): The landscape elements of landform, vegetation, water, color, and related factors result in notable or exemplary visual features and/or attractions. When analyzing scenic values, additional factors -- such as seasonal variations in vegetation, scale of cultural modifications, and the length of time negative intrusions are viewed -- may be considered. Scenery and visual attractions may be highly diverse over the majority of the river or river segment.

Recreation (R): Recreational opportunities are, or have the potential to be, popular enough to attract visitors from throughout or beyond the region of comparison or are unique or rare within the region. Visitors are willing to travel long distances to use the river resources for recreational purposes. River-related opportunities could include, but are not limited to, sightseeing, wildlife observation, camping, photography, hiking, fishing and boating.

- Interpretive opportunities may be exceptional and attract, or have the potential to attract, visitors from outside the region of comparison.
- The river may provide, or have the potential to provide, settings for national or regional usage or competitive events.

Fish (F): Fish values may be judged on the relative merits of either fish populations, habitat, or a combination of these river-related conditions.

- *Populations*: The river is nationally or regionally an important producer of resident and/or anadromous fish species. Of particular significance is the presence of wild stocks and/or federal or state listed (or candidate) threatened, endangered

² It does go on to state, "The existence, however, of low dams, diversion works, and other minor structures at the time any river is proposed for inclusion in the National Wild and Scenic Rivers System shall not automatically bar its consideration for such inclusion: Provided, that this shall not be construed to authorize, intend, or encourage future construction of such structures within components of the National Wild and Scenic Rivers System". (U.S.C. Sec. 1286)."

³ See <http://www.nps.gov/ncrc/programs/rtca/nri/states/oh.html>

or sensitive species. Diversity of species is an important consideration and could, in itself, lead to a determination of "outstandingly remarkable."

- *Habitat:* The river provides exceptionally high quality habitat for fish species indigenous to the region of comparison. Of particular significance is habitat for wild stocks and/or federal or state listed (or candidate) threatened, endangered or sensitive species. Diversity of habitats is an important consideration and could, in itself, lead to a determination of "outstandingly remarkable."

The description for the Cuyahoga River listing on the Nationwide Rivers Inventory website (see Table H-1) includes:

Designated segment of State Scenic Rivers System. Swamp forest vegetation. Two Ohio endangered species present, Iowa darter and lake chubsucker. Excellent canoeing stream. Small and large mouth bass and northern pike fishing. A scenic stream flowing through woods and farmland with some marsh and wetland. Near cities of Cleveland and Akron.

Scenery - Some of the components mentioned under scenery above are covered under Programmatic EA topics for Water Quality (Section 5.1), Vegetation (Section 5.5) and Cultural Resources (Section 5.10).

Recreation - Preserving park recreational resources is one of the purposes for CVNP. Because of poor water quality, canoeing is not encouraged in the river (see Section 4.12). This is a condition that should be remediated in the future (see Section 5.1, Water Quality). The river also provides a setting for many other recreational settings in CVNP. The analysis covered under the impact topic of Visitor Use/Experience (Section 5.12) would best provide an analysis for this ORV. Wildlife (Section 5.8) would be another related topic.

Fish – Two species are mentioned in the description above as Ohio endangered species. These are the Iowa darter and lake chubsucker. Since the NRI listing in 1982, the Iowa darter is now listed as a species of concern, and the lake chubsucker is listed as an Ohio threatened species. Neither species is included in the list of species for CVNP⁴. Northern pike are also not listed, but smallmouth bass are listed. It is therefore concluded that the description refers primarily to some of the other segments of the Cuyahoga River listed with the subject segment. The ORV for fish includes aspects of Water Quality (Section 5.1) and Aquatic Habitat (Section 5.6).

If there are impacts to the free-flowing nature or to one or more of the ORVs, the river segment designated as NRI would lose all potential for ever becoming designated as a Wild or Scenic River in the future.

⁴ See <http://www.nps.gov/cuva/nature/florafauna/fishlist.htm>

3.0 Alternative 1 - No Action

3.1 Free-Flowing Nature

As mentioned above, such things as impoundment, diversion, straightening, rip-rapping or other modification of the waterway are features that would jeopardize the free-flowing nature of an NRI segment. Table H-2 shows the Riverbank Monitoring Locations within the NRI Segment (Study Reaches 3 through 5). This information is taken from Appendix B. For each location, the River Management Assessment Condition is provided.

For Alternative 1, it is assumed that in time, all of the locations would develop to Condition C and require such techniques as a rip-rap toe and bio-engineering measures. All of this would detract from the free-flowing nature of the river as discussed.

Table H-2. Riverbank Monitoring Locations within NRI Segment.

Study Reach	Towpath Station/Railroad Milepost	River Management Assessment Condition
3	1115+00	C
3	1107+00	B
3	1100+00	B
3	1075+00	A
3	1045+00	A
3	1010+00	C
4	900+00	A
4	875+00	B
4	55.31 to 55.36	C
4	57.24	B
4	57.36	B
5	805+00	A
5	790+00	A
5	781+00	A
5	57.77	A
5	57.94	A
5	59.34 TO 60.0	C

Table H-3 is taken from Section 5.8 of the Programmatic EA. It summarizes existing and proposed hardening for the NRI study reaches. Alternative 1 would add 5,300 feet of riverbank hardening, an increase of 51.2 percent over the existing hardening. This would leave the NRI segments with an overall hardening percentage of 34.8 percent, which would detract from the free-flowing nature of the NRI segment.

Table H-3. Summary of Existing and Proposed Bank Armoring Conditions.

Study Reach Number	River Length (feet)	Existing Armoring		Proposed Bank Armoring Conditions							
		Length (ft.)	%	Alternative No. 1 - No Action				Alt. No. 2 - Riverbank Management			
				Inc. Length (ft.)	% Change	Total Length (ft.)	%	Inc. Length (ft.)	% Change	Total Length (ft.)	%
3	14,500	2,860	19.7%	2,110	73.8%	4,970	34.3%	440	15.4%	3,300	22.8%
4	22,700	1,635	7.2%	1,680	102.8%	3,315	14.6%	240	14.7%	1,875	8.3%
5	7,600	5,800	76.3%	1,510	26.0%	7,310	96.2%	0	0.0%	5,800	76.3%
TOTAL	44,800	10,295	22.0%	5,300	51.2%	15,595	34.8%	680	6.6%	10,975	24.5%

3.2 ORV Analysis

Following is a discussion of the impact to the ORV's as taken from the Programmatic EA analysis

Scenery – Analysis for Water Quality (Section 5.1) concludes that Alternative 1 may result in some Moderate Adverse impacts, and that no riverbank restoration projects having Major impacts or Impairment would be constructed. Analysis for Vegetation (Section 5.4) concludes that the adverse impact of this alternative on vegetation is Moderate Adverse, with a long term Minor Beneficial impact resulting from increased site stability which would allow for longer succession between disturbances, leading to more mature plant communities over time. Analysis for Cultural Resources (Section 5.9) concludes that under Alternative 1, Major Adverse impacts on cultural resources of the Valley Railway and Ohio & Erie Canal and associated cultural landscapes are not expected, although there may be Minor Adverse impacts on historic resources. Any loss of riverbank near historic resources would be rehabilitated and “replaced-in-kind,” thus maintaining the cultural landscape elements of the resources. The visual impact of temporary fencing around unstable sites on historic resources is Negligible and reversible. From all of this, it may therefore be concluded that this alternative would have no major adverse impact of the ORV for Scenery.

Recreation – Analysis for Visitor Use/Experience (Section 5.11) concludes that there would be no more than temporary impacts to the characteristics that contribute to recreation. There would be a potential temporary indirect impacts and cumulative impacts, but it should be available to avoid such impacts. It was concluded that there are no potential impacts that would cause more than temporary impairment of visitor use/experience at site-specific or local areas of CVNP. Analyses for Water Quality (Section 5.1) conclude that Alternative 1 may result in some Moderate Adverse impacts, and that no riverbank restoration projects having Major Adverse impacts or Impairment would be constructed. Analysis for Wildlife (Section 5.7) concludes there could be Moderate Adverse to Major Adverse impacts from this alternative for wildlife that uses riverbanks for denning, but no impairment is expected. There could be Minor Adverse impacts to other animals. It may therefore be concluded that this alternative would have no major adverse impact of the ORV for Recreation.

Fish – Analysis for Water Quality (Section 5.1) concludes that Alternative 1 may result in some Moderate Adverse impacts, and that no riverbank restoration projects having Major Adverse impacts or Impairment would be constructed. An assessment for Aquatic Habitat (Section 5.5) of the impacts from Alternative 1 are concluded to be Moderate Adverse overall. It may therefore be concluded that this alternative would have no major adverse impact of the ORV for Fish.

Based on ORV analysis, there would be potential for no more than a moderate or temporary impact on any of the characteristics making up the ORVs.

4.0 Alternative 2 – Riverbank Management

4.1 Free-Flowing Nature

Only those locations rated for Condition C in Table H-2 would receive such features as riprap or other treatments that could affect the free-flowing nature of the river as described. On Table H-3, Alternative 2 would add only 680 feet of riverbank hardening, an increase of 6.6 percent over the existing hardening. This would leave the NRI segments with an overall hardening percentage of 24.5 percent. This would be much less detracting from the free-flowing nature of the NRI segment than Alternative 1.

4.2 ORV Analysis

Following is a discussion of the impact to the ORV's as taken from the Programmatic EA analysis

Scenery – Analysis for Water Quality (Section 5.1) concludes that the impacts to the water quality parameters would be of Negligible or Minor Beneficial intensity. Because Alternative 2 would implement measures to prevent erosion well before the erosion threatens existing infrastructure, this alternative would help preserve existing riparian canopy cover, thus preventing the adverse impacts upon temperature associated with the loss of shade. This relates well to the assessment for Vegetation (Section 5.4), which concluded that under this alternative, adverse impacts to native vegetation in areas subject to construction of bank stabilization measures would be less than under the No Action Alternative, but would still be Moderate Adverse. Analysis for Cultural Resources (Section 5.9) concludes that Alternative 2 does not impair historic structures or associated cultural landscapes at CVNP and that there may be Minor Beneficial impacts from Alternative 2 with additional preservation of historic resource associated with the Ohio & Erie Canal. From all of this, it may therefore be concluded that this alternative would have no major adverse impact on the ORV for Scenery.

Recreation – Analysis for Visitor Use / Experience (Section 5.11) concludes that there would be fewer impacts under this alternative than with the No Action Alternative. Analysis for Water Quality (Section 5.1) concludes that the impacts to the water quality parameters would be of Negligible or Minor Beneficial. Because Alternative 2 would implement measures to prevent

erosion well before the erosion threatens existing infrastructure, this alternative would help preserve existing riparian canopy cover, thus preventing the adverse impacts upon temperature associated with the loss of shade. Analysis for Wildlife (Section 5.7) concludes that overall, Alternative 2 would pose fewer adverse impacts and more benefits to wildlife compared with Alternative 1. It may therefore be concluded that this alternative would have no major adverse impact on the ORV for Recreation.

Fish – Analysis for Water Quality (Section 5.1) concludes that the impacts to the water quality parameters would be of Negligible or Minor Beneficial. Because Alternative 2 would implement measures to prevent erosion well before the erosion threatens existing infrastructure, this alternative would help preserve existing riparian canopy cover, thus preventing the adverse impacts upon temperature associated with the loss of shade, which would also benefit Aquatic Habitat (Section 5.5). This section concludes that overall impacts from Alternative 2 would be Minor Adverse. It may therefore be concluded that this alternative would have no major adverse impact of the ORV for Fish.

Based on ORV analysis, there would be potential for no more than a Moderate Adverse or temporary impact on any of the characteristics making up the ORVs.

5.0 Conclusion

Neither of the alternatives would have major adverse impacts on the ORV's in the NRI segment of the Cuyahoga River. Alternative 1 would have much more impact to the free-flowing nature of the river than Alternative 2.

Some impact to the free-flowing nature of river in these segments is not avoidable for those locations rated as Condition C. Such impacts would be minimized by the Riverbank Management Program. Impact to the free-flowing nature of the NRI segment may be further minimized by avoiding the use of such techniques as riprap spurs, bendway weirs, and engineered log jams (see Appendix I). It should be helpful that none of the monitoring locations in the NRI segment are rated as "D."

6.0 References

Council on Environmental Quality. 1980. Procedures for Interagency Consultations to Avoid or Mitigate Adverse Effects on Rivers in the Nationwide Inventory. Federal Register, Vol. 45, No. 175, Monday, September 8, 1980. pp. 59191-59192.